

Claims

- Sub. B2>
1. An indexable cutting insert for turning having generally polygonal shape, including an upper surface (11) and a bottom surface (12) and these interconnecting edge surfaces (13, 14, 15) at least apart of the intersecting lines between the edge surfaces and the upper surface forming at least a main cutting edge (19), a secondary cutting edge (18) and a curved corner region therebetween which is asymmetric and divided into a plurality of circular segments which at the intersection line with the upper surface form edge portions wherein immediately adjacent ones of the circular segments being of mutually different radii, a secondary cutting edge (18) extends adjacent to a radial edge (20) which is located on same side of the bisector as the main cutting edge and appears with a radius of curvature, the size of said radius being at least 5 times larger than the corner edge (21) located on opposite side of the bisector and which provides a transition to the main cutting edge (19), characterized in, that
- a) the insert is in the shape of a regular polygon-shaped body,
- b) that the transition surface between the cutting edges (17, 18) and the top surface (11) is in the shape of an edge reinforcing land (22) of such shape that the width of the land portion (22') along the secondary cutting edge (20) on one side of the bisector (B) is smaller than the width of the land (22) along the curved corner cutting edge (21) located on opposite side of the bisector (B).
2. Indexable insert according to claim 1, characterized in, that the width of the edge reinforcing land (22) is the same along the curved corner cutting edge (21) as well as along the straight secondary cutting edge (18).
3. Indexable insert according to any of the claims 1-2, characterized in, that the width of the land (22) along the secondary cutting edge (20) constitutes 50-70 % of the width of the land along the corner cutting edge (21).

4. Indexable insert according to any of the claims 1-3, characterized in, that the insert in the corner region at a certain distance from the land (22) appears with a planar inclined surface (27) that is depressed in relation to the edges whilst being confined by sine-formed side confining edges (29, 34) which converge outwards  
5 towards the cutting corner.

5. Indexable insert according to claim 4, characterized in, that the sine-formed side limiting edge (29) on one side of the bisector (B) extends into a mainly straight primary edge (30) which entirely is located on one side of the bisector (B)  
10 parallel with the extension of the radial edge (20).

6. Indexable insert according to claims 4 or 5, characterized in, that the straight edge (30) extends via an obtuse angled corner (31) into another straight edge (32) which is intersected by the bisector (B).  
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7. Indexable insert according to claim 6, characterized in, that the bisector (B) is intersecting the straight secondary edge (32) mainly in the middle thereof.

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